



# Bradley Kohler

MECHATRONICS ENGINEER · UNIVERSITY UNDERGRAD

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## Engineering Co-op and Career Services

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## Overview of Co-op Experience: Advanced Research Intern

"I wish that I could arrive for my first day of work again, knowing what I know today because I have developed incredible skills working with the advanced research team at Northern Digital Inc"

I participated in a sixteen-month professional development year because I was uncertain of my passion as a Mechatronics Engineer and curious if my skills were developed enough for the workplace. This was hands down a great decision on my part. There are so many reasons why I am happy with my experience. Co-op is simply so much different than lectures, labs and tests. It gives you great insight of your strengths, weaknesses and interests. Some days I would struggle so much, but with perseverance I would finally feel the satisfaction of completing a difficult task. I feel that the struggle brought to light all my qualities that I was more-or-less unaware of.

## Highlight of Personal Benefit

A lot can happen in a year but if I boil it down to a short summary my personal benefit was self-confidence, creativeness and insight. Self-confidence is not an easy skill to develop. Naturally, the more micromanaged I am the less confidence I have in myself. Right now, my confidence is at an all-time high. I have never felt that my work is insignificant or irrelevant. It is important work and I am the one who must do it. I am part of the advanced research team and I contribute as any other team member. I have learned that my creativeness thrives under these conditions. Not only do I have to achieve the task at hand, but I also must do it in such a way that others can collaborate. I am creative in the ways that I solve problems and develop the tools necessary so that others can understand what I have done. This has given me insight to the ways in which system development happens in the workplace. System development is a team effort and it can't be done alone. Software is an iterative process and that means leaving behind the tools for further work.

## Impact on Program of Study

My experience has impacted my understanding of Mechatronics Engineering in so many ways. I have a better understanding of my role as an engineer and have a better appreciation for the process of taking a product from conception to fruition. Mechatronics is an incredibly diverse field of study. Therefore, it can be unclear where we fit as engineers in a larger company. I have learned the process in which system development happens. I now understand the system design process and the ways in which we can assign project phases and divide work leading to a common goal. Most of the work we will do as Mechatronics Engineers can be summarized by two words: "system modelling". This is the process in which we take various systems and model them in such a way that they are useful. This is effective because it enables us to divide the system in to subsystems and effectively divide the work between developers. A sixteen-month co-op has given me the opportunity to see all the struggles of developing products. Technology is advancing faster now than ever before. This requires us to be smart and cutting edge with our knowledge. Anyone

who is a developer will understand that it is a constant struggle. This often means spending your free time getting up to speed. Problems arise throughout the development phase that are sudden and unexpected. To solve these problems, it means going above and beyond your job description. We all rely on each other in the workplace and so we all must do our part.

## **Further Motivation**

All these things have only motivated me further to keep working my hardest. I have discovered that knowledge is something that I value more than anything else. So, even though I am leaving Northern Digital Inc. for eight months I will aspire to be smarter and develop my engineering skills further. The learning never stops, and I am more enthusiastic than ever to take on new challenges.